

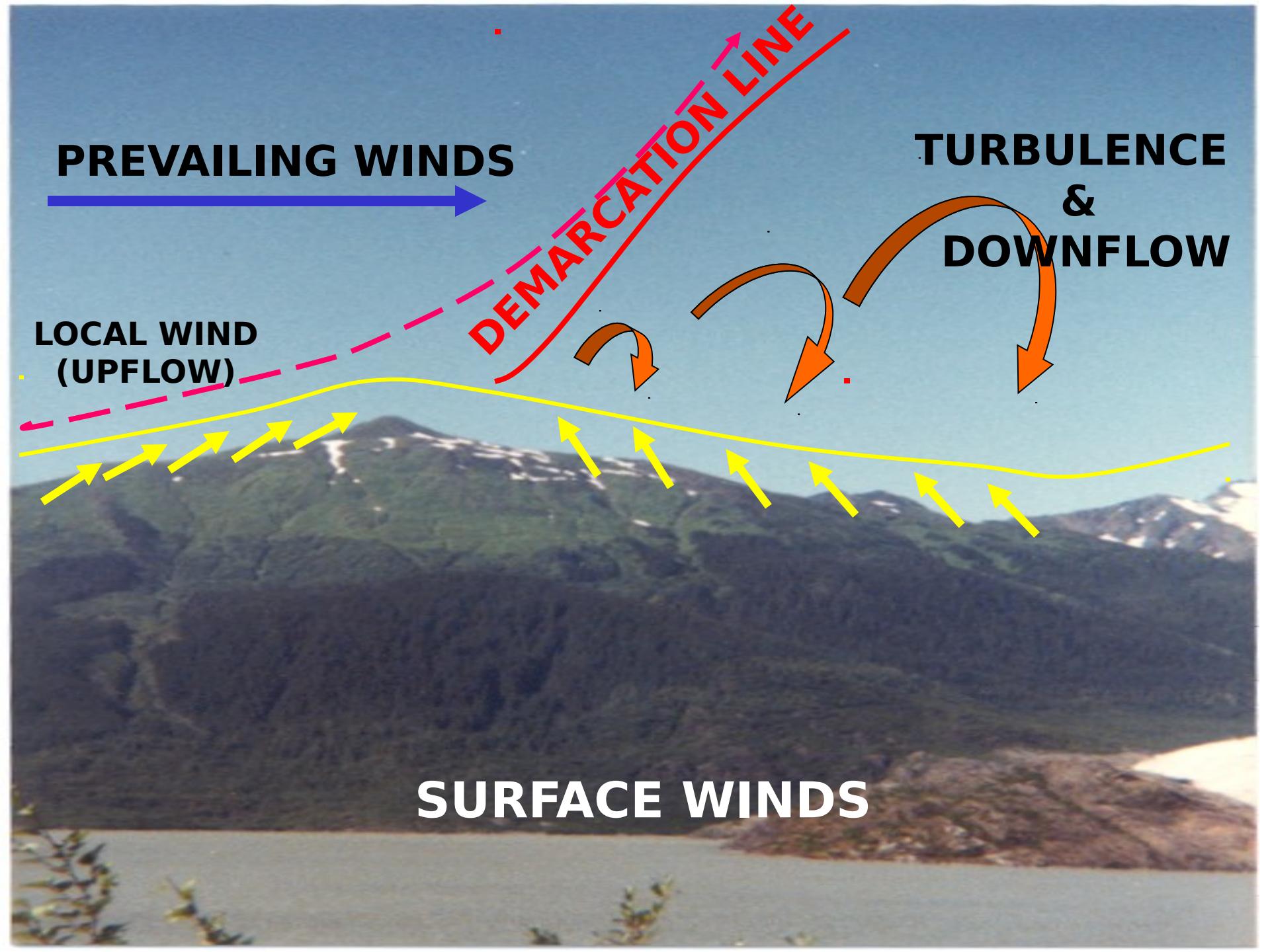
# MOUNTAIN OPERATIONS

The background image depicts a helicopter in flight against a backdrop of misty, rugged mountains. A bright, possibly sunburst or explosion, is visible in the distance, casting a glow over the scene. The overall atmosphere is dramatic and suggests a military or search-and-rescue operation in a high-altitude environment.



## **REFERENCES:**

- ***FM 1-202 ENVIRONMENTAL FLIGHT***
- ***AERONAUTICAL INFORMATION MANUAL (AIM)***



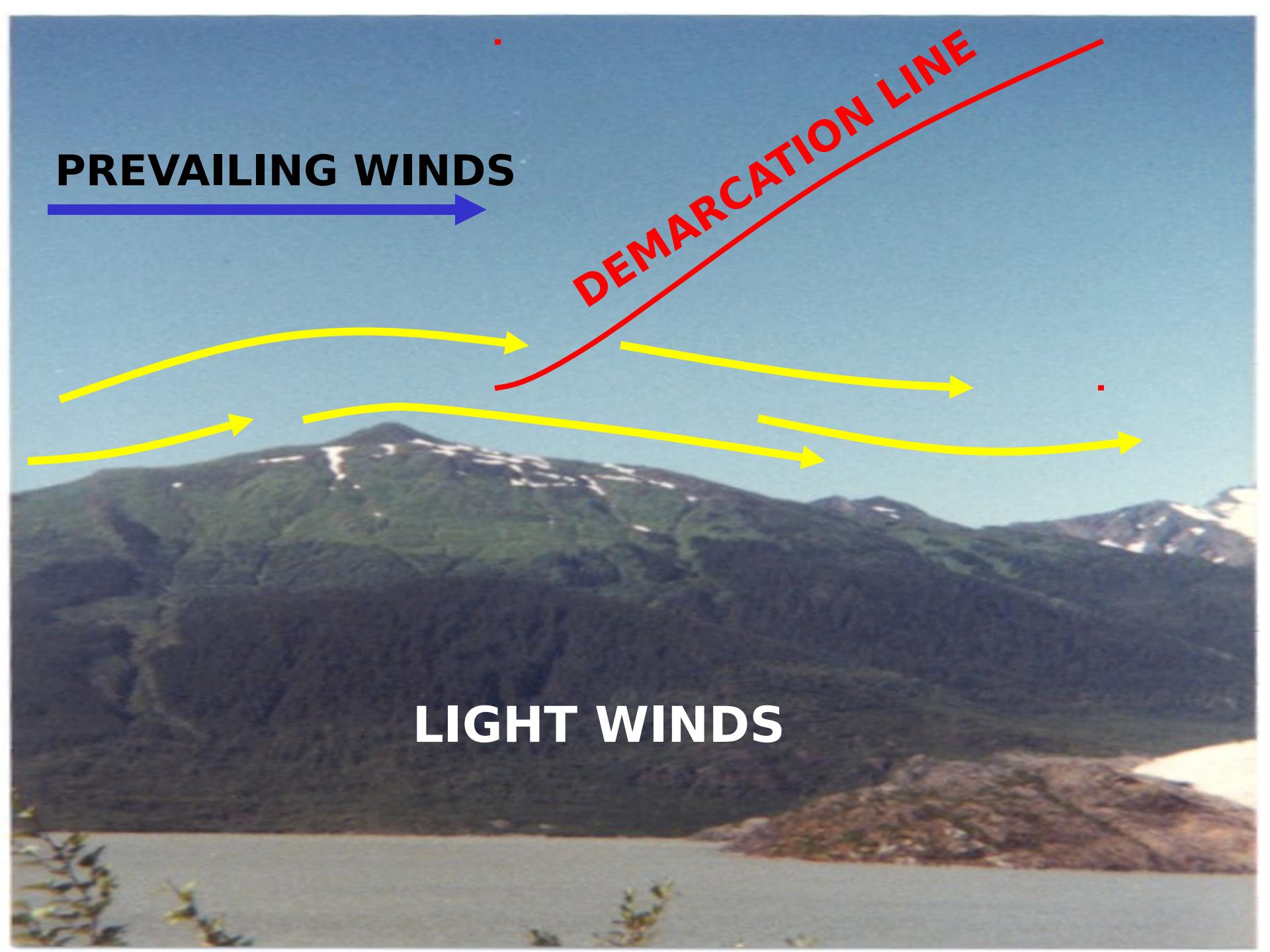
**PREVAILING WINDS**

**TURBULENCE  
&  
DOWNFLOW**

**LOCAL WIND  
(UPFLOW)**

**DEMARCATION LINE**

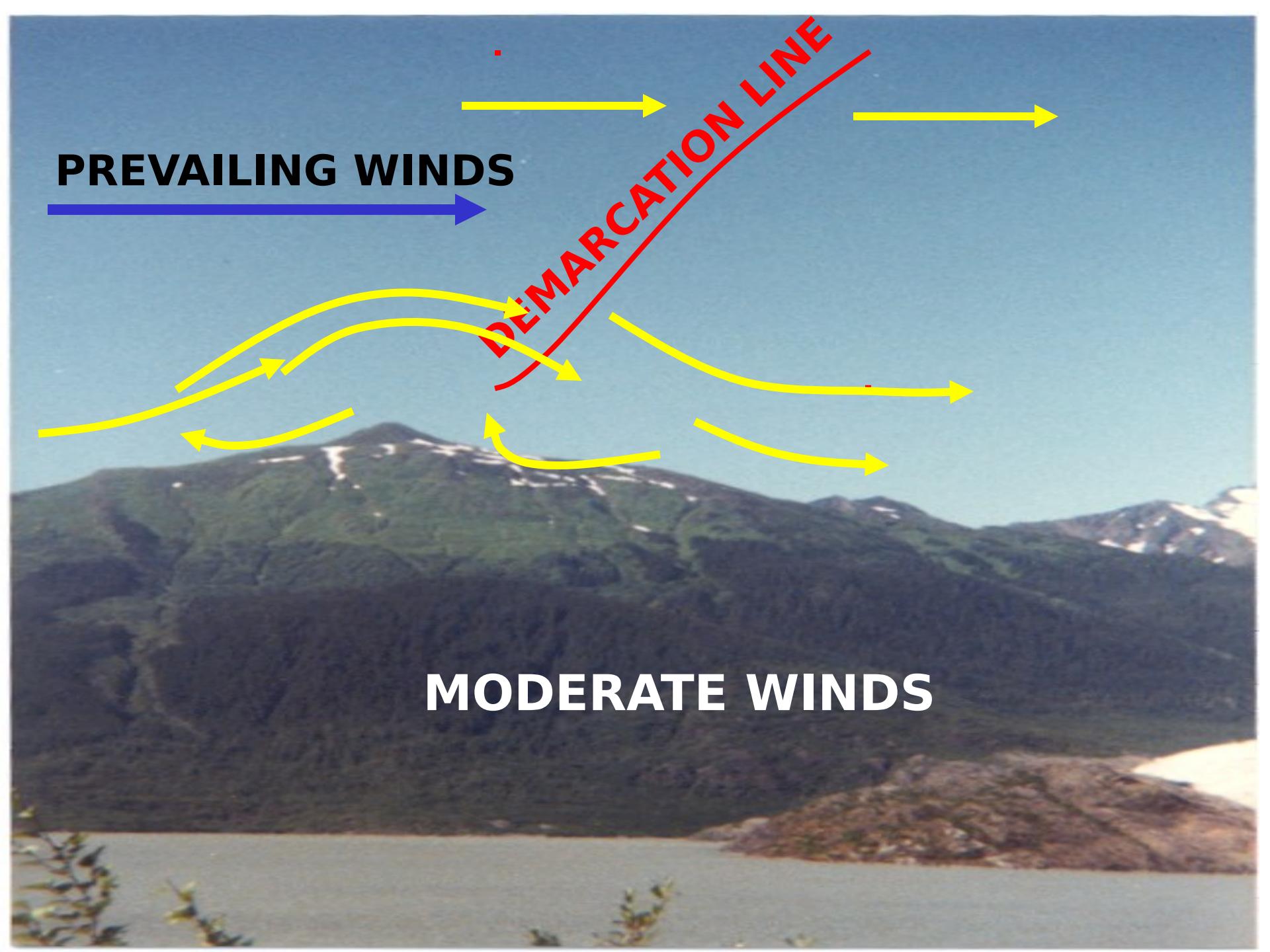
**SURFACE WINDS**



**PREVAILING WINDS**

**DEMARCATION LINE**

**LIGHT WINDS**



**PREVAILING WINDS**

**DEMARCATION LINE**

**MODERATE WINDS**

**PREVAILING WINDS**

**DEMARCATION LINE**

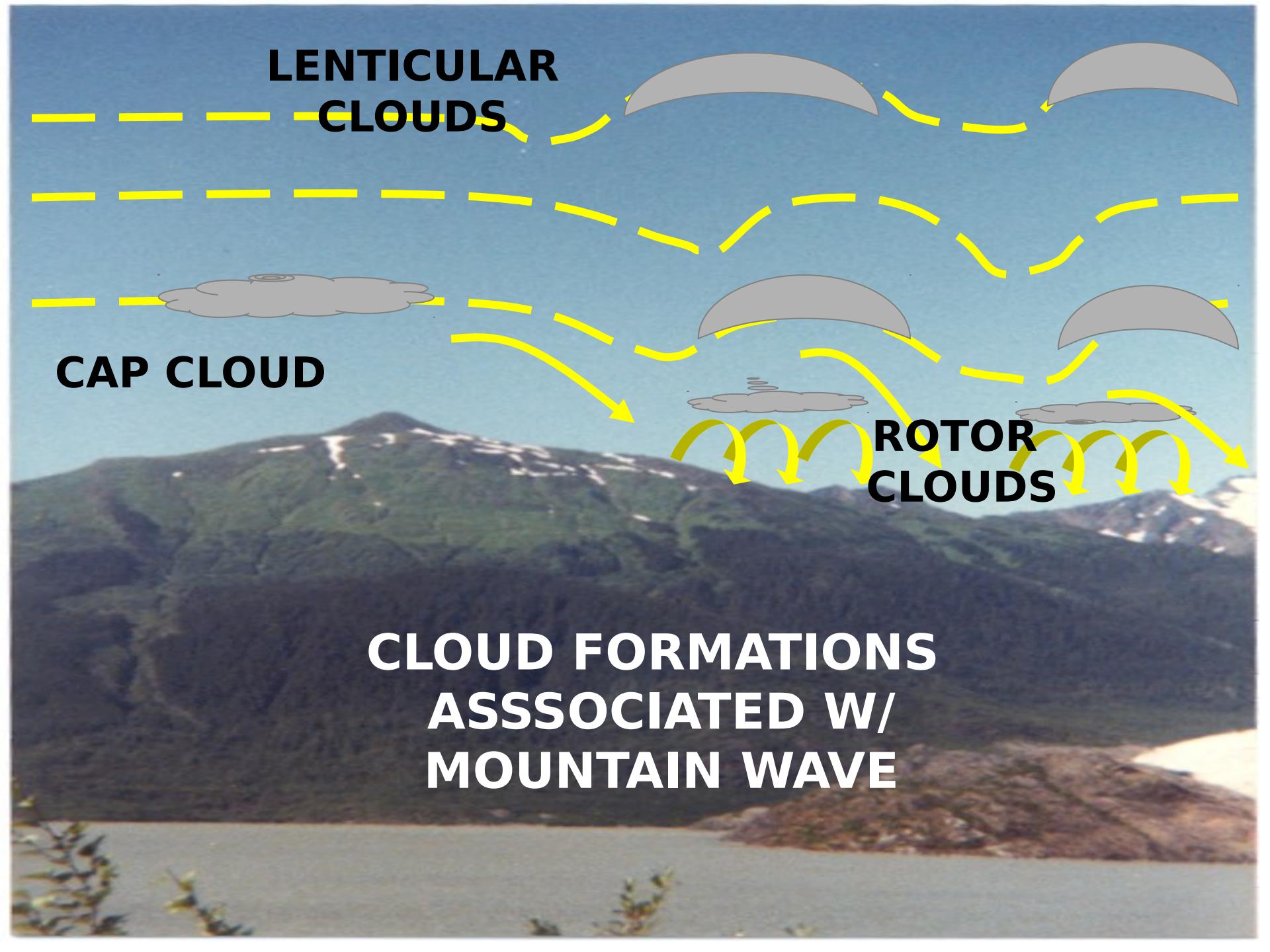
**STRONG WINDS**

# STABLE LAYER

WIND



MOUNTAIN WAVE



**LENTICULAR  
CLOUDS**

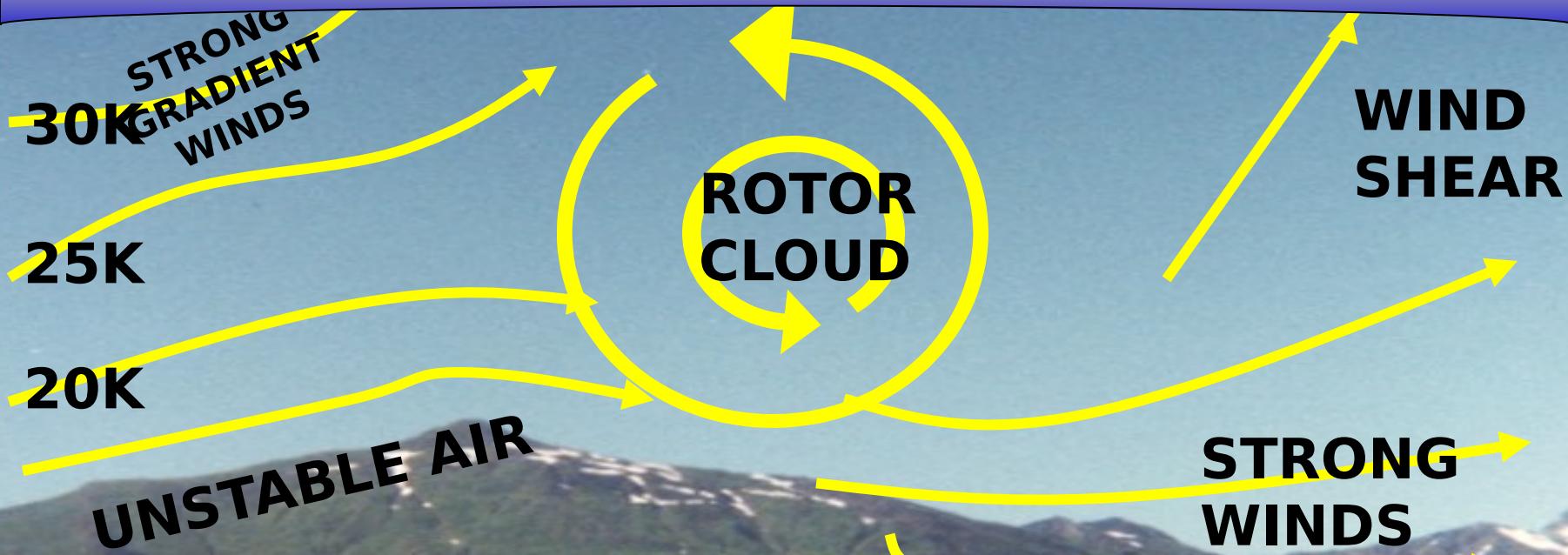
**CAP CLOUD**

**ROTOR  
CLOUDS**

**CLOUD FORMATIONS  
ASSOCIATED W/  
MOUNTAIN WAVE**

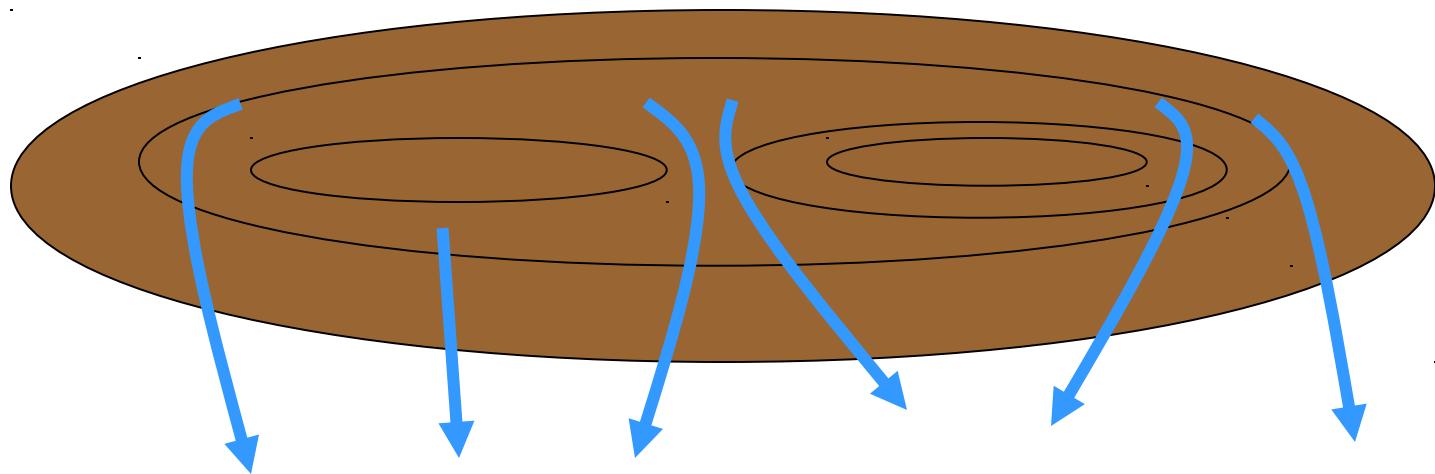
**SLACK WINDS**

**STABLE LAYER**



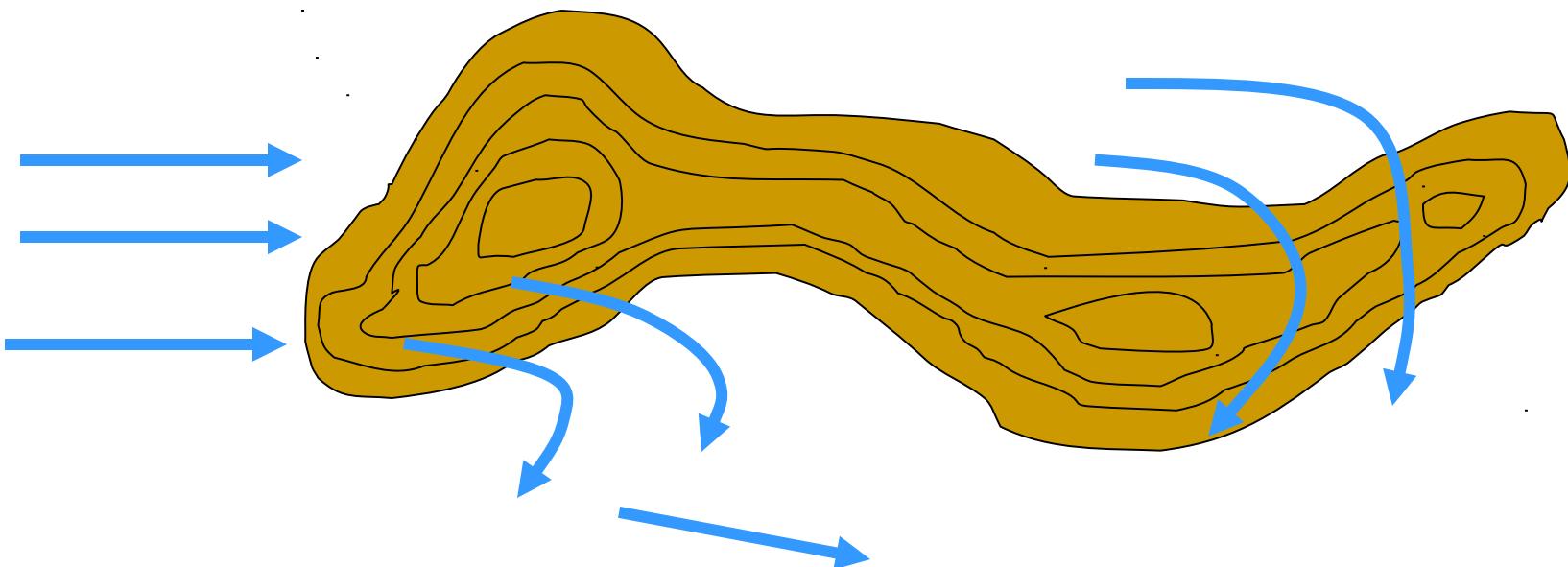
**ROTOR STREAMING  
TURBULENCE**

**WIND**

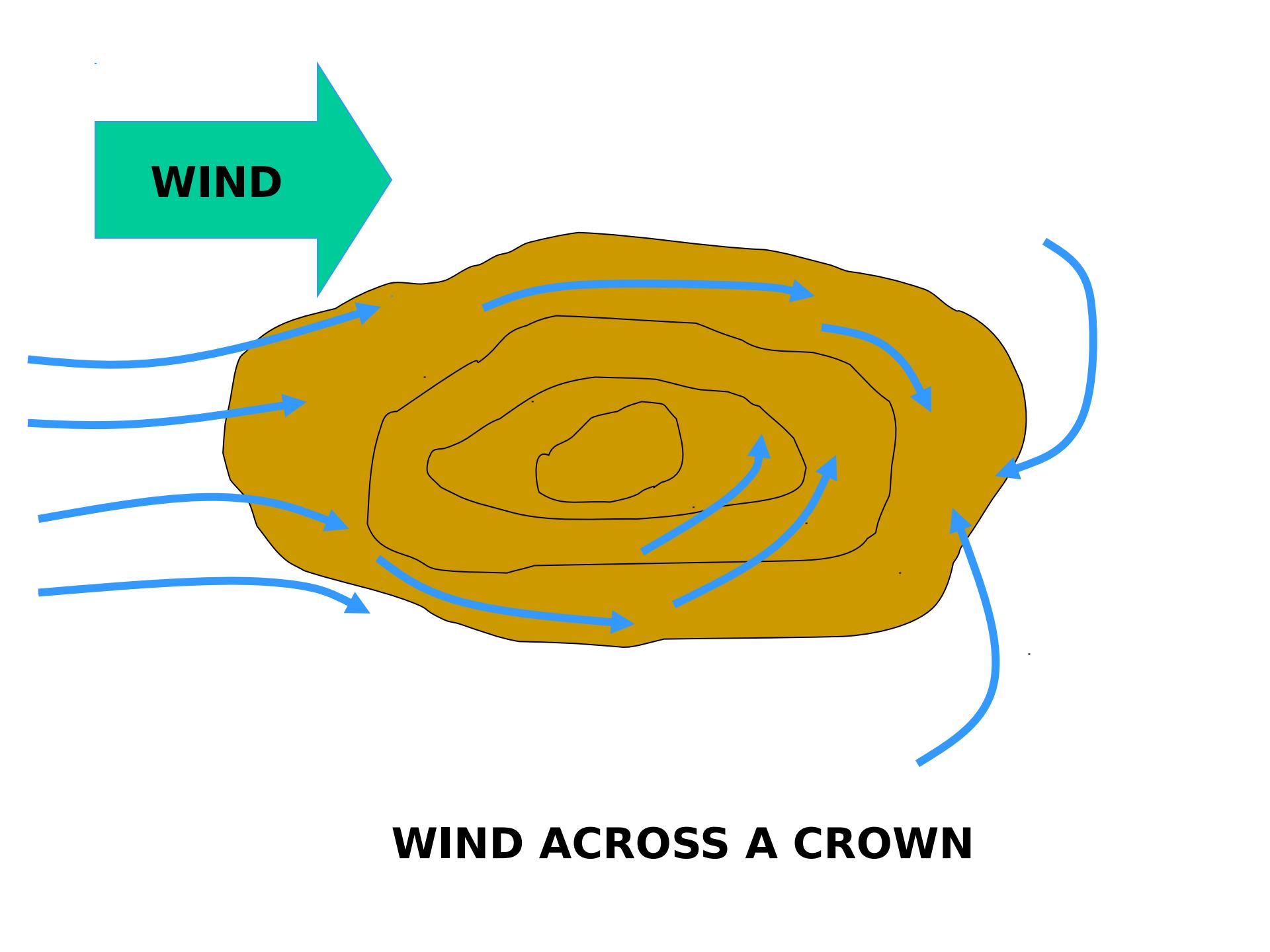


**WIND ACROSS A RIDGE**

**WIND**



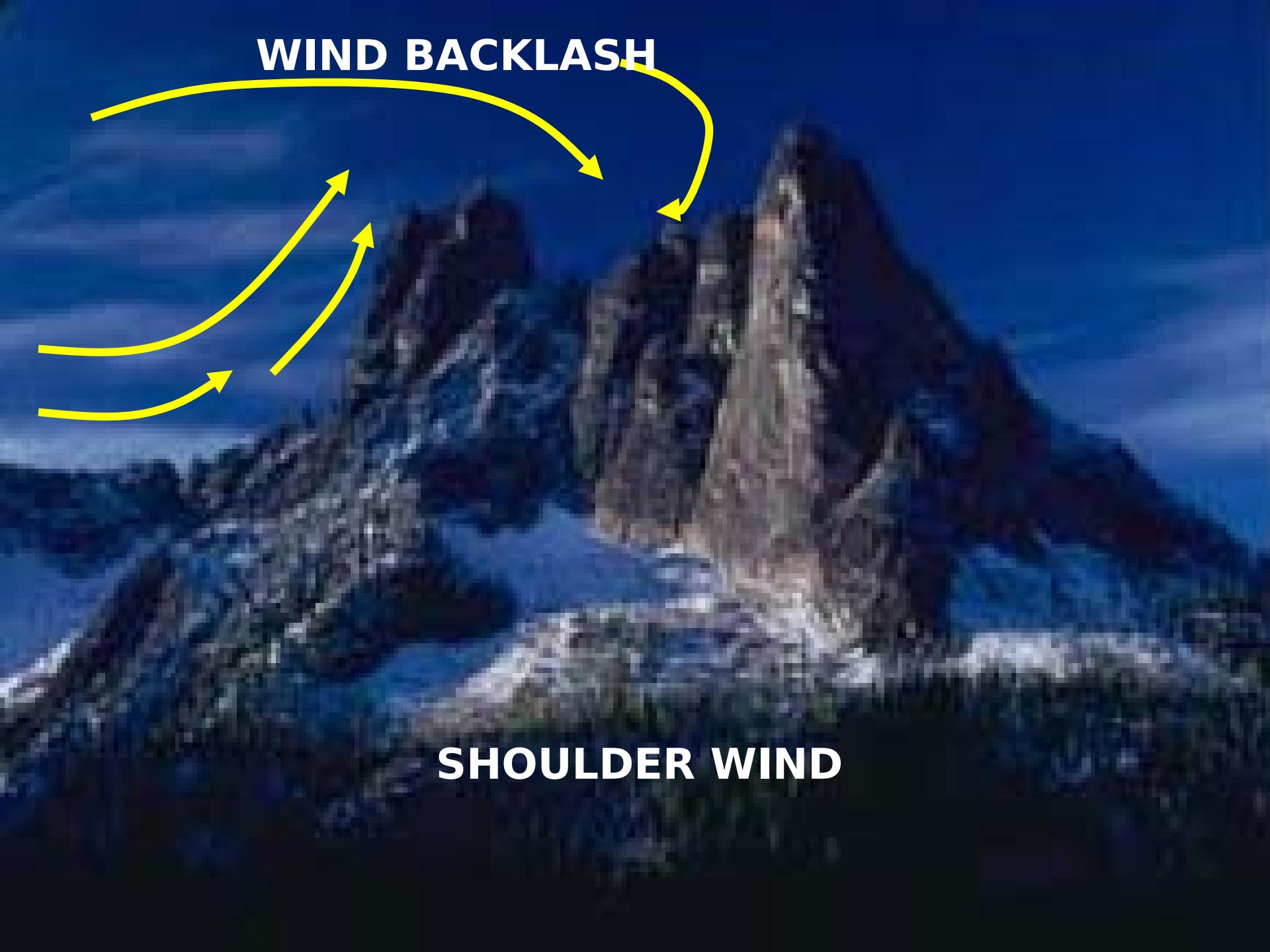
**SNAKE RIDGE**



A diagram illustrating air flow around a tree. A large teal arrow labeled "WIND" points from left to right. The tree is represented by a brown shape with black contour lines indicating its profile. Blue arrows show the direction of air movement. On the left side, several blue arrows point towards the tree from the left, representing迎风面 (leeward side). On the right side, blue arrows curve away from the tree, representing the leeward side. Inside the tree's silhouette, two small blue arrows point upwards, representing air rising from the canopy.

**WIND**

**WIND ACROSS A CROWN**



**WIND BACKLASH**

**SHOULDER WIND**

**STRONG WINDS**

**WIND ACROSS A CANYON**



# **FLYING TECHNIQUES**

**NORMAL TAKEOFF**



**AIRSPEED OVER ALTITUDE**

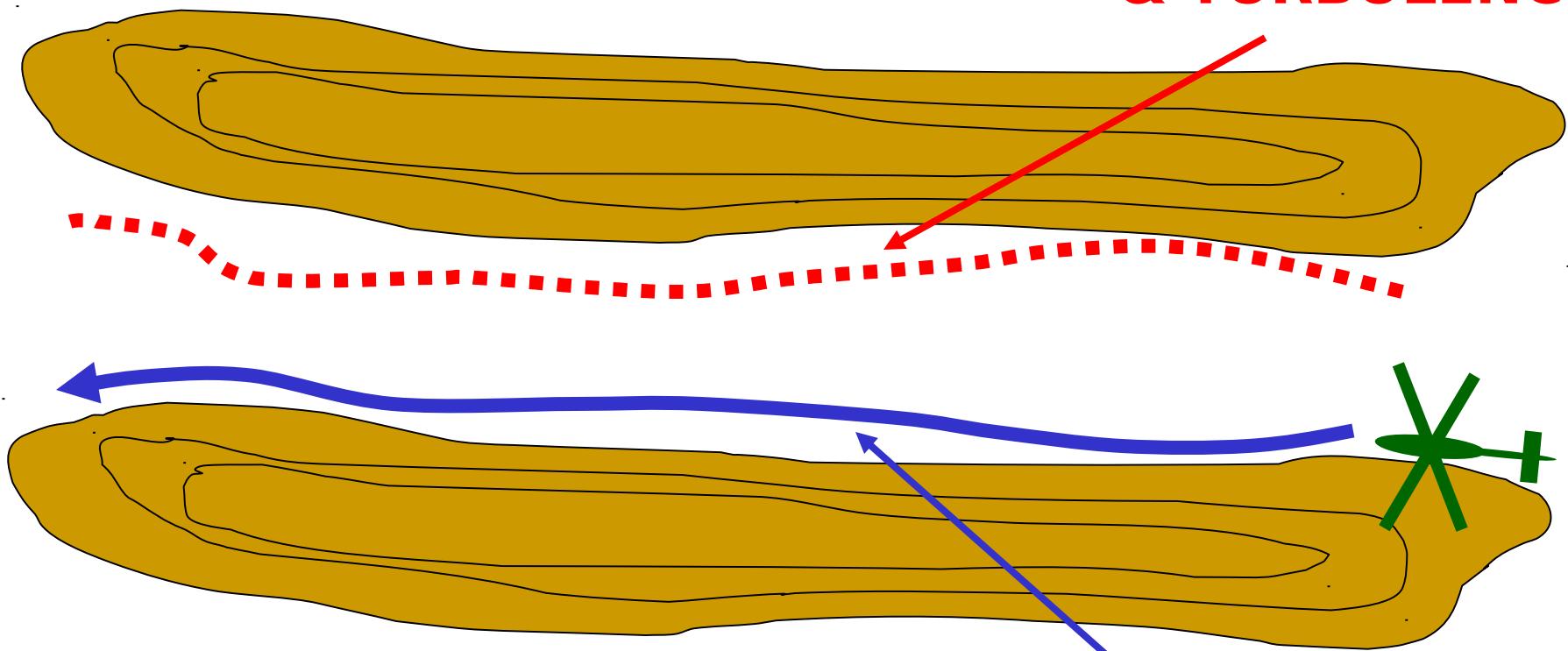
**MOUNTAIN TAKEOFF**

# **ENROUTE**



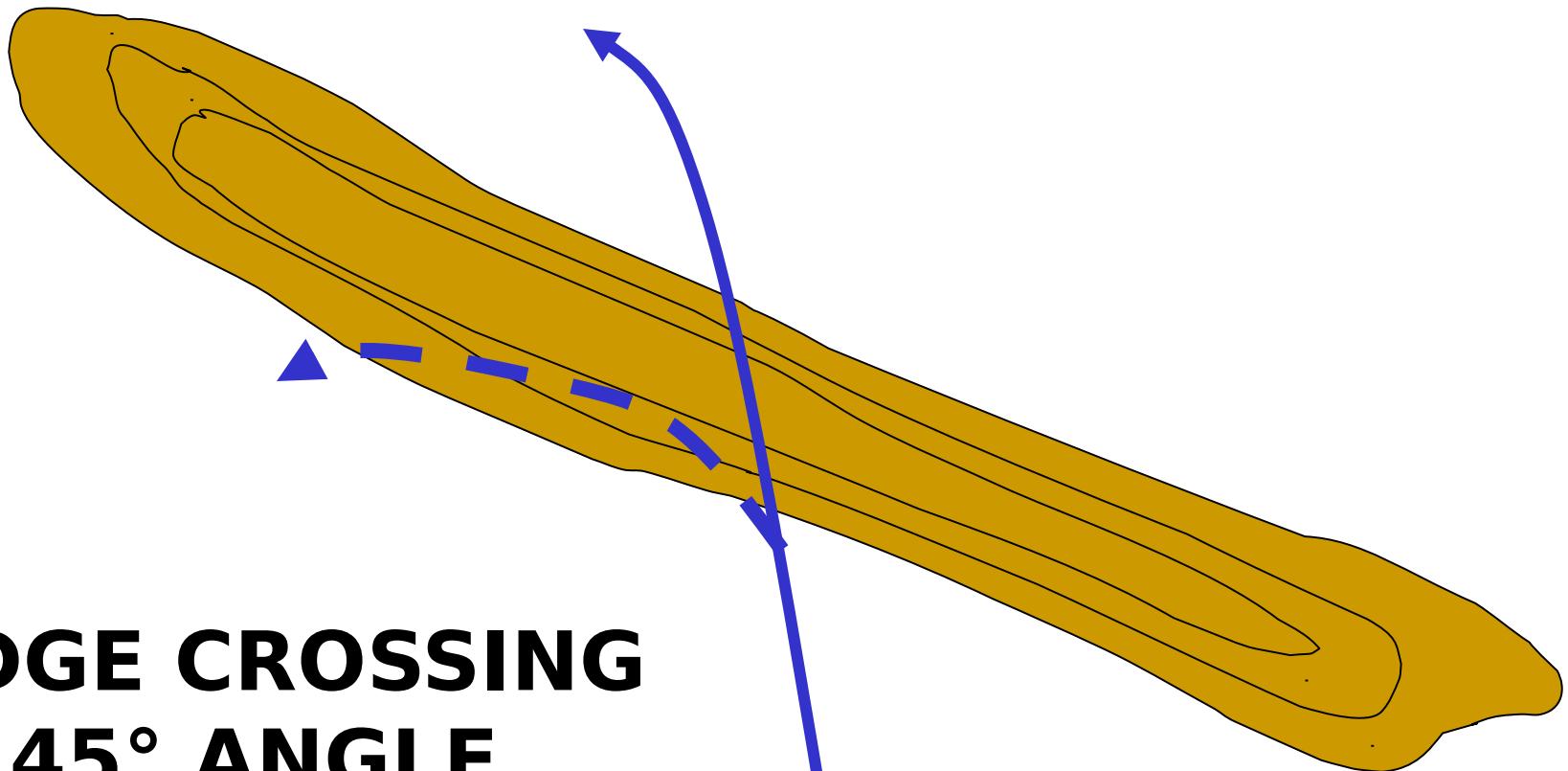
WIND

DOWNDRAFT  
& TURBULENCE

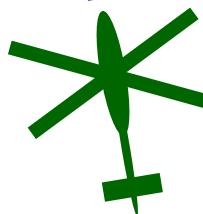


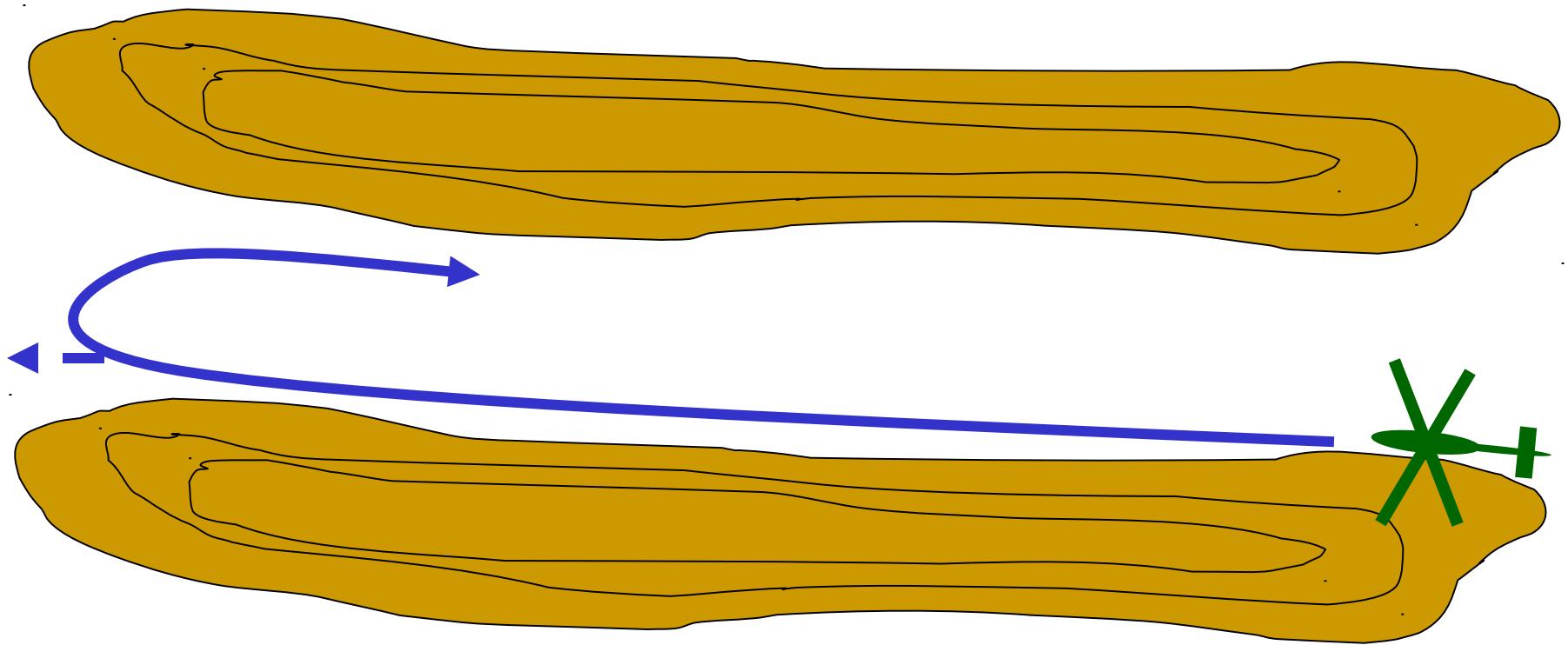
UPDRAFT

FLIGHT ALONG A VALLEY



**RIDGE CROSSING  
45° ANGLE**





**180° TURN OR EARLY CLIMB**

# **APPROACH**

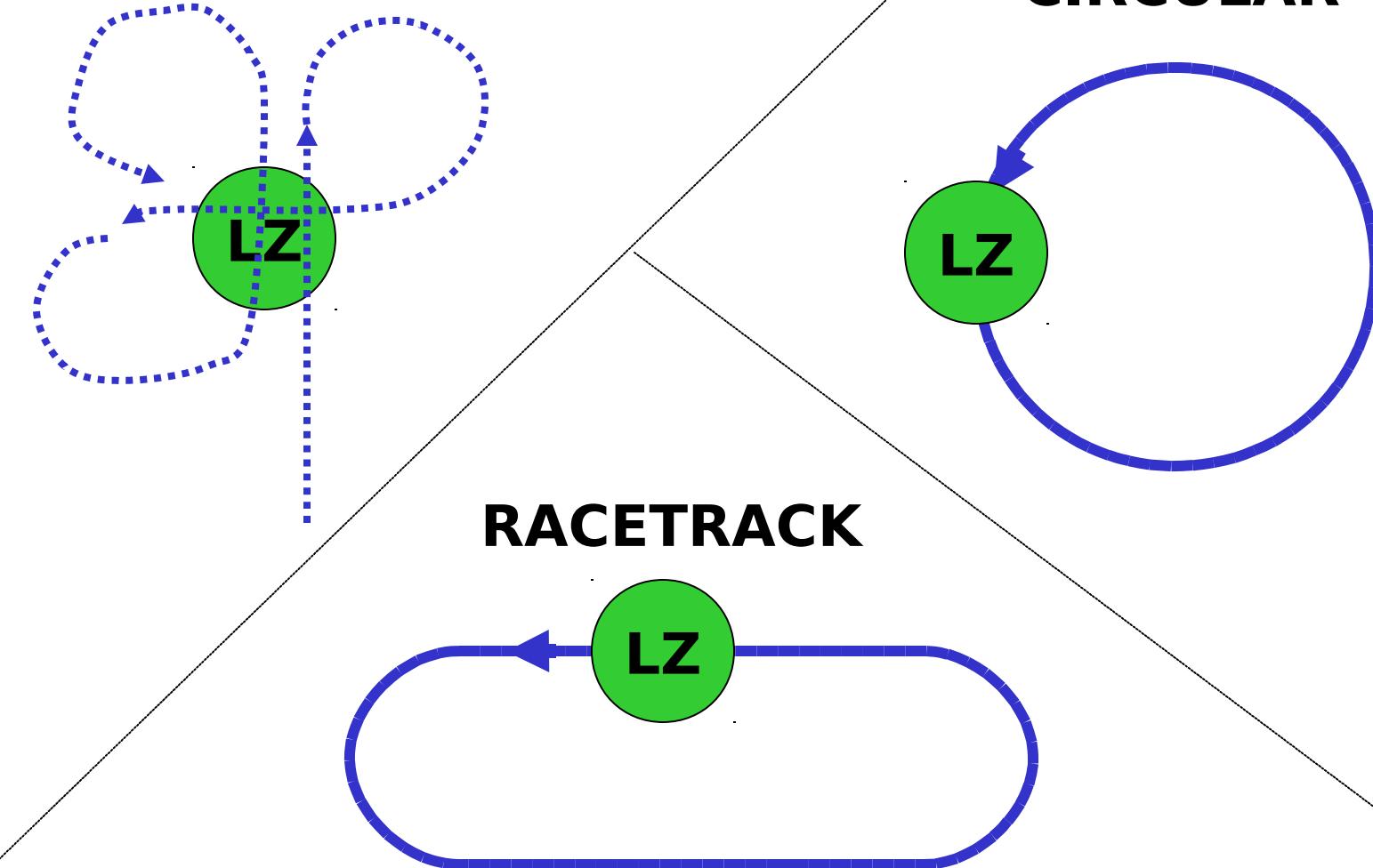
**&**

# **LANDING**

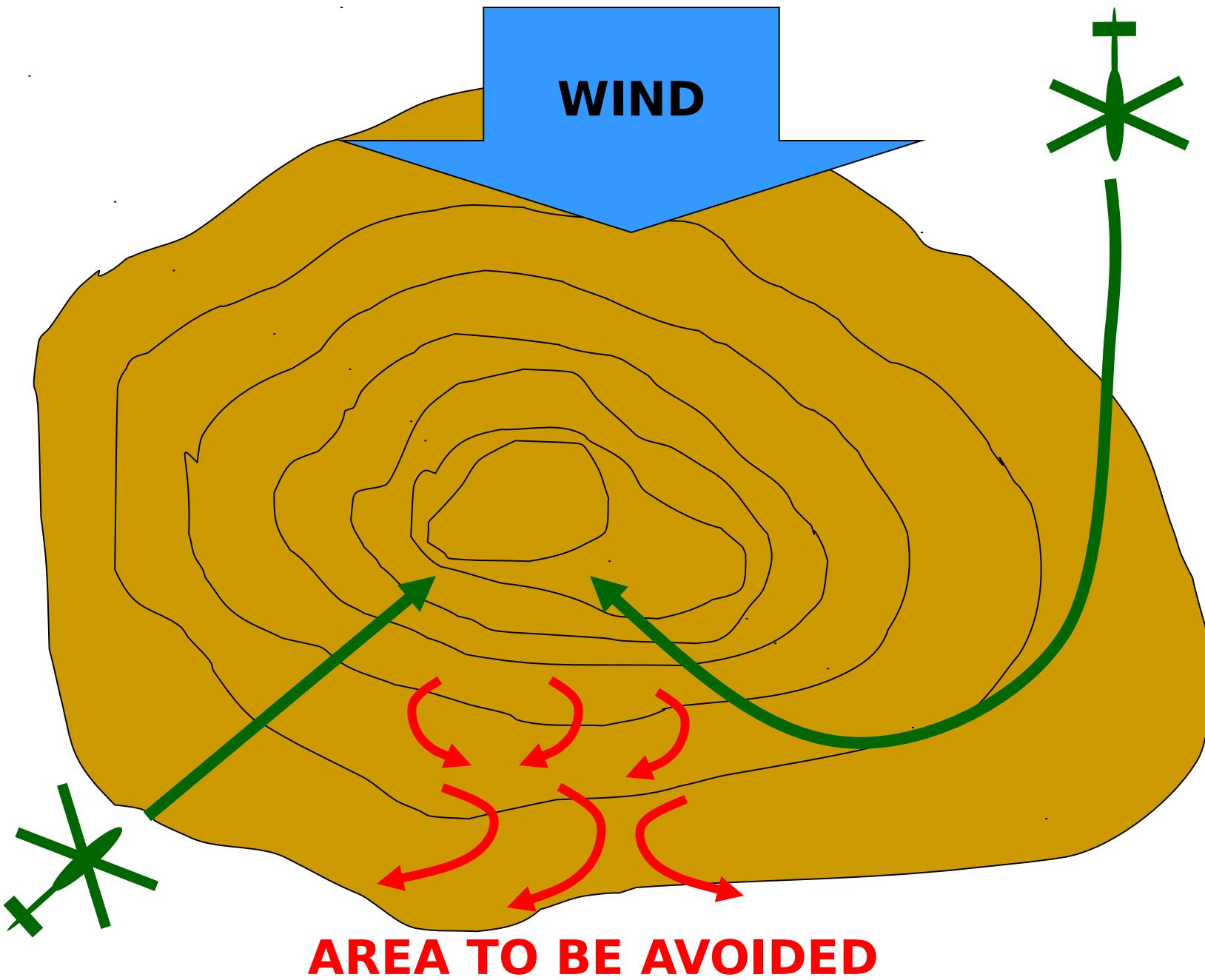


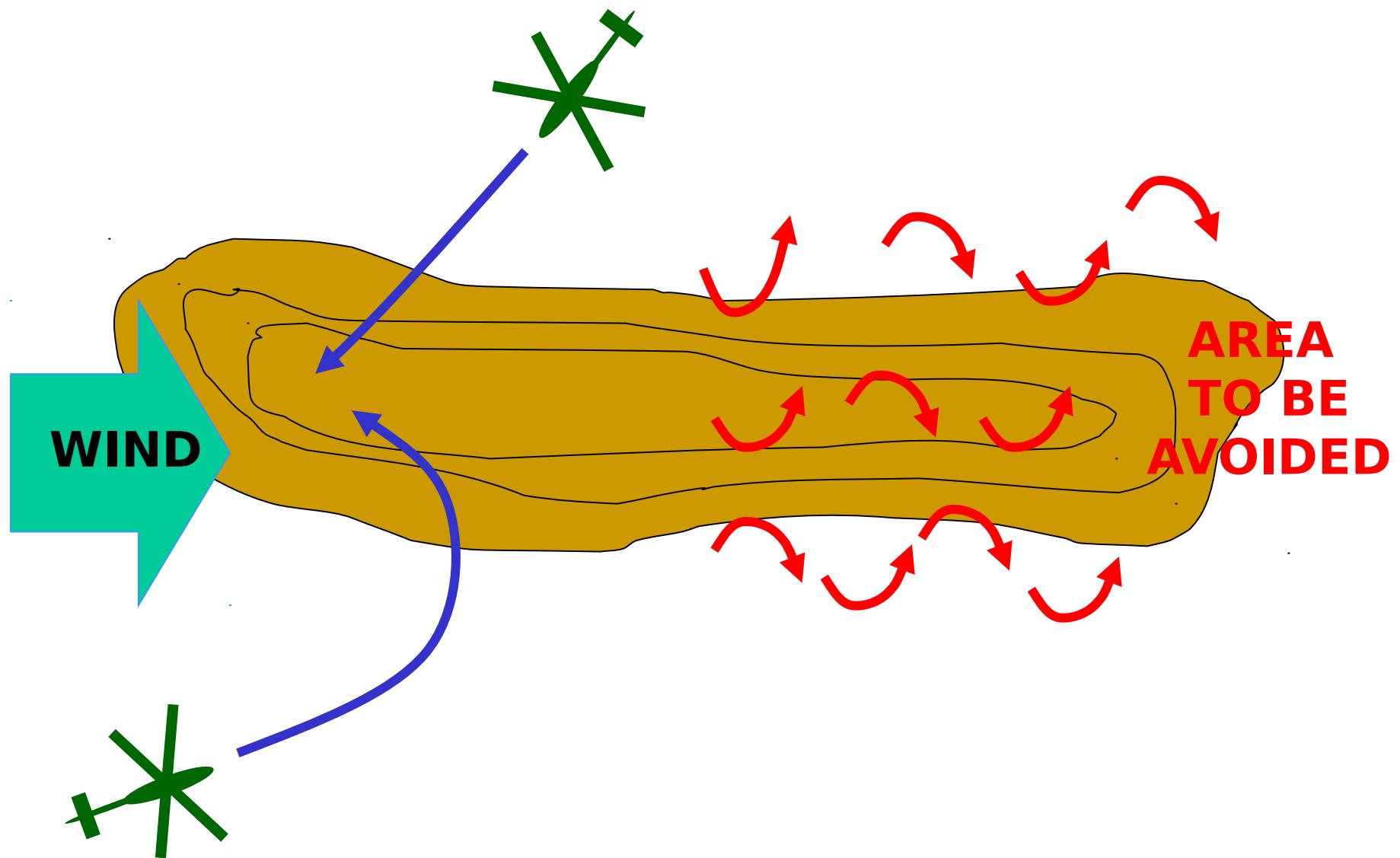
**FIGURE EIGHT**

**CIRCULAR**

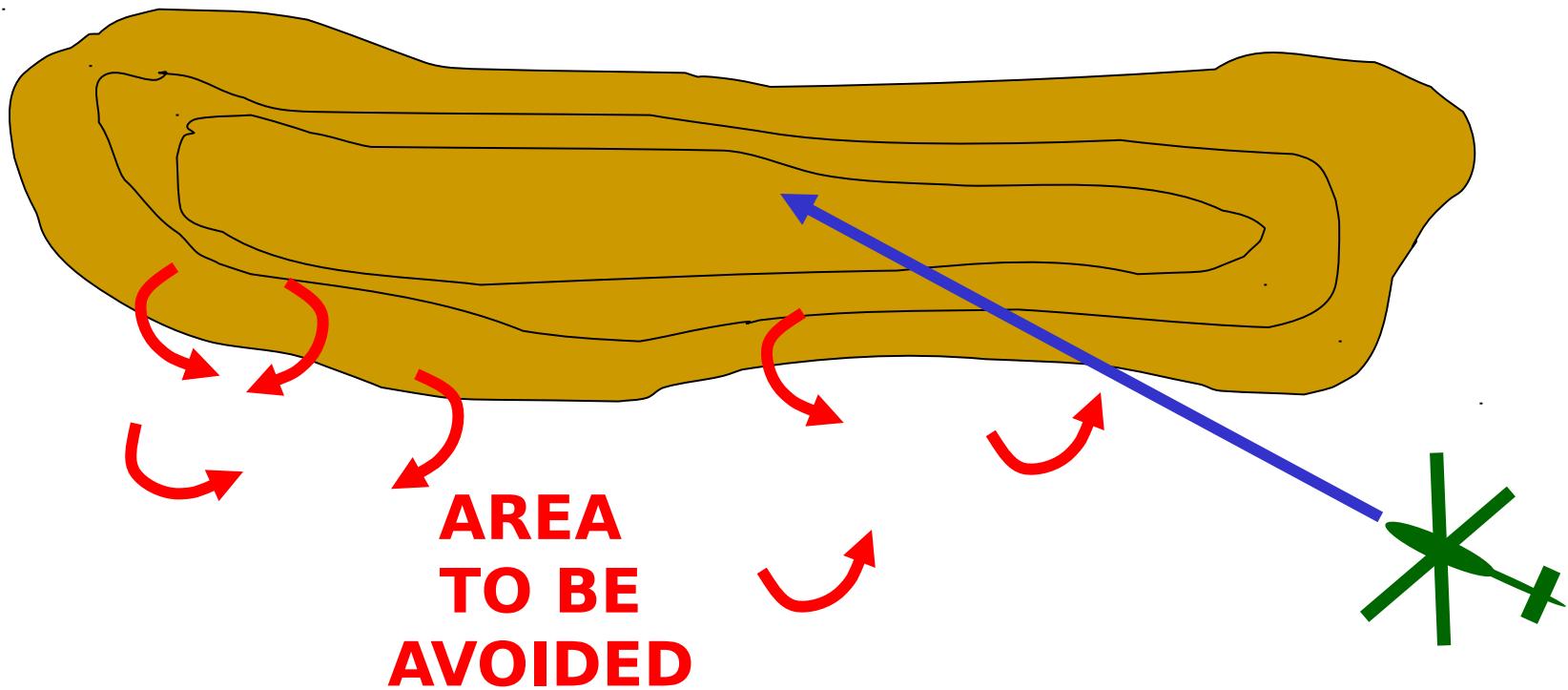


**LZ RECONNAISSANCE**

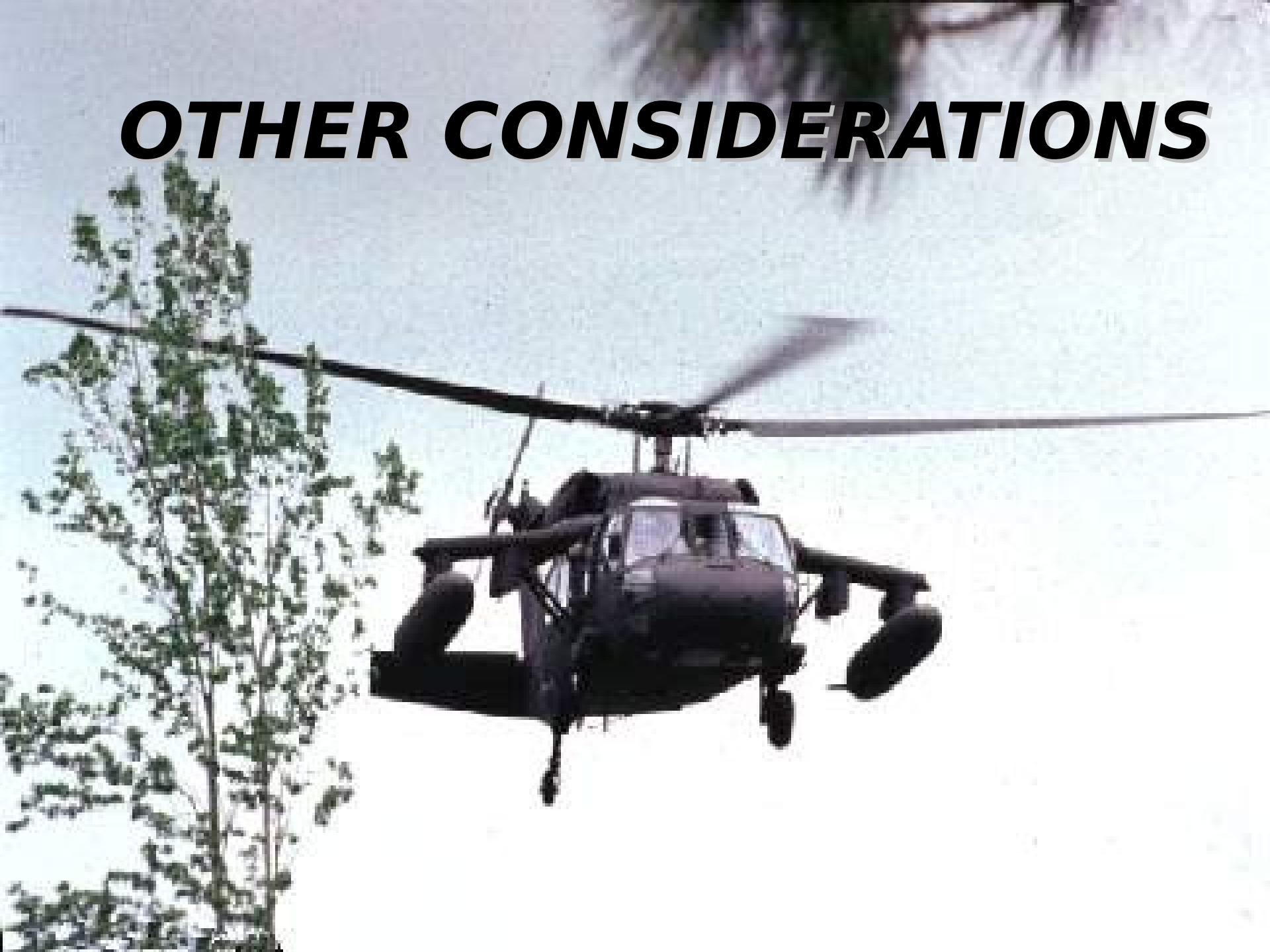




WIND



# **OTHER CONSIDERATIONS**



## SETTLING WITH POWER

- Vertical / Near Vertical Descent  
at least 300fpm
- Low Forward Airspeed
- Using some of available Engine Power  
20%-100%



### HOVER IGE

- Reduced rotor tip vortex
- Reduced velocity of induced airflow

### HOVER OGE

- Large blade-tip vortexes
- High velocity of induced airflow